

# Green Marketing and Greenwashing Effects on Consumer Purchase of Electric Cars: The Moderating Role of Environmental Knowledge

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## ABSTRACT

China promotes electric cars as an effective solution to environmental problems. In this context, green marketing and greenwashing are considered to be important factors that influence consumers to purchase electric cars. Based on the signalling theory, this study analyses the role of consumer trust in the influence of green marketing and greenwashing on consumers' purchase of electric cars and examines the moderating effect of environmental knowledge. 440 electric car owners from Beijing, China participated in a survey, whose results were analysed by the Partial Least Squares Structural Equation Modelling (PLS-SEM). The results show that although green marketing demonstrated a positive impact, greenwashing negatively affected Beijing consumers' trust in electric cars. However, environmental knowledge moderates the relationship between consumer trust and purchasing behaviour of electric car.

## KEYWORDS

China, Consumer, Electric Car, Environmental Knowledge, Green Marketing, Greenwashing, Purchasing Behaviour, Trust

## INTRODUCTION

The recent surge in population growth has inevitably increased the demand for natural resources, instigating various environmental issues and lowering consumers' quality of life (CCICED, 2023; Ouyang et al., 2019). Green products are considered effective ways to solve environmental problems and improve people's quality of life (Setyawan et al., 2018). The Chinese public eagerly anticipates innovation and green development, with carbon emission reduction at its core, brought about by green technological innovation (Huang et al., 2023).

According to Huang and Ge (2019), car ownership in China increased from 108.38 million to 208.16 million between 2012 and 2017. The subsequent rise in petrol and diesel product consumption has generated large quantities of exhaust gases, deteriorating the environment (Belkhome et al., 2022).

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Hence, the significant increase in car ownership is a key determinant of energy consumption and environmental pollution (Huang & Ge, 2019; Wang & Dong, 2016).

The environmental performance of automobiles and the automotive industry, a vital catalyst of the national economy, has garnered significant attention (Tu & Yang, 2019). Electric vehicles (EVs) play an essential role in reducing greenhouse gas emissions compared to conventional fuel vehicles (Shui et al., 2024; Ravi & Surendra, 2021). Consumers who purchase energy-saving EVs prioritize the environmental performance of these vehicles, making it a pivotal factor in their purchase decisions (Lin & Shi, 2022). From a scholarly perspective, continued non-green consumption could increase environmental and ecological degradation (Yue et al., 2020).

Beijing, the largest city in China with the highest number of cars, recorded a total of 5.64 million vehicles by the end of 2017. Given the steady rise in urban dwellers, car ownership, energy consumption, and carbon emissions, Beijing must identify workable strategies to save energy and reduce harmful emissions (Fu et al., 2023; Huang & Ge, 2019; Ge et al., 2014). Introducing EVs substantially reduces fuel supply–demand conflicts and toxic emissions while improving the environment (Pan et al., 2019).

The government of China has adopted the compelling slogan, “Green water and green mountains are the silver mountains of gold,” to restructure the ecological civilization system and develop a sustainable nation (Ferguson, 2021). This profound maxim encapsulates green development as an overarching principle integrated into all dimensions of national economic and social progress (Huang et al., 2021).

The emergence of green marketing corresponds to the fundamentals of sustainable development strategies while addressing consumers’ growing environmental concerns and fostering sustainable organizational development (Bathmathan & Rajadurai, 2019). Specifically, green marketing approaches build customer trust in a product brand to foster community and brand engagement (Saleh et al., 2021).

Companies operating in China’s expansive consumer market, known for its rich history and cultural heritage, must induce consumers’ interest in EVs via green marketing and greenwashing while considering novel consumer perceptions in a traditional Chinese society. Hence, this study examined how automotive companies can influence consumer behavior to purchase EVs by implementing green marketing and greenwashing strategies (Gionfriddo et al., 2023).

At this critical moment in China’s electric car development transformation, the factors influencing consumers to purchase electric cars must be studied in depth (Yang et al., 2020). Previous studies on electric car green marketing mechanisms have shown mixed results (Yeğın & Ikram, 2022). Since the greenwashing behaviors of Chinese electric car companies are intentional and destructive, identifying and eliminating them requires further research and improvement (Liu et al., 2023). In addition, the factors influencing consumers’ intention to purchase electric cars and pro-environmental behaviors, such as environmental and eco-labeling knowledge, have been less studied (Fang et al., 2023).

Despite the efforts of administrative departments, private companies, and stakeholders, especially environmental researchers, the process of popularizing electric cars in most countries remains slow, which means that studies on the implementation of electric car consumption have not yet shown substantial results (Higueras-Castillo et al., 2024). Although previous researchers have focused on the causal relationship of consumer trust (Bashir et al., 2020; De Jong et al., 2019), insufficient research has examined its impact on green marketing and electric car purchasing behavior (Lavuri et al., 2022; Paço et al., 2019). In addition, although previous studies have pointed out the harm of greenwashing to the low-carbon economy, the academic community has yet to provide effective management plans for greenwashing (Liu et al., 2023). Moreover, the emergence of corporate environmentalism around greenwashing has led to diverse marketing strategies, which has become a new research area (Augustine & Javvaji, 2022).

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